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THE NEGATIVE OR WITHDRAWAL ATTITUDE:

A Study in Personality Organization

BY
HELEN PALLISTER, Ph. D.

ARCHIVES OF PSYCHOLOGY
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ARCHIVES OF PSYCHOLOGY

COLUMBIA UNIVERSITY, NEW YORK CITY

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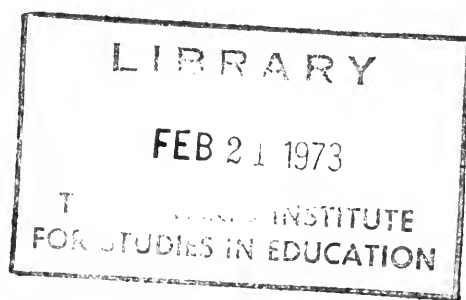
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The Negative or Withdrawal Attitude

A Study in Personality Organization

CHAPTER I

THE PROBLEM AND THE LITERATURE

I. *The Problem*

The present research is concerned with the investigation of what has been called the negative or withdrawal attitude.¹ As used in psychological literature, the terms neuroticism, introversion, and seclusiveness are closely synonymous with the negative or withdrawal attitude. Jung's definition (8) of introversion might well be quoted to describe what is meant by withdrawal attitude: ". . . introversion means a turning inwards of the libido whereby a *negative* relation of the subject to the object is expressed. Interest does not move towards the object but recedes towards the subject." In discussing neuroticism, the Thurstones (17) stress the fact that in its less serious form neuroticism is a manifestation of introvert tendencies.

The degree of withdrawal attitude may be estimated from the report, given by the individual, of avoidance to direct contact with the environment in different situations. Responses given by groups of individuals to questionnaires show that the attitude varies from extreme withdrawal to extreme positive or approach response. Such a continuum was discovered by Heidebreder (7) in her study of introversion. The numerical scores formed a distribution approximating normality. Ambiversion was the most common kind of attitude. Introversion and extroversion were the extremes of the distribution.

As carried out in this investigation, the study of withdrawal attitude involves the concept of trait. The term trait, here used in a statistical sense, implies two characteristics. When a

¹ The term, negative or withdrawal attitude, is used in this research as the best general descriptive term to signify the kind of response which the Individuality Record, employed in the research, measures. The use of the term is necessarily based upon a subjective analysis of what the inventory tests, since no objective determination of the nature of the responses is possible.

certain functional unity can be shown in responses to several stimulus situations, we have presumptive evidence, at least, for the existence of a trait. Homogeneity in response, then, is the first essential of a trait. The second essential of a trait is that it should exhibit itself as a real activity. It should show correlation with an outside criterion. In the case of certain aptitudes, the satisfaction of both criteria is relatively easy to demonstrate. For example, in the study of mechanical ability as a trait, performance on tests of such ability can be checked against actual performance in tasks requiring mechanical ability. For personality traits it is likewise desirable to check the subject's report of behavior against the objectively determined existence of that behavior. The difficulty of showing correspondence between an individual's report and the objective manifestation of behavior is, however, vastly more difficult than for such a trait as mechanical ability, because the situations in which the behavior appears and the method of observing it are unstandardized. Less insistence is therefore placed upon satisfaction of the second essential of a trait than upon that of the first in this study.

The research here reported was undertaken with the aim of determining answers to the following queries:

1. Does the tendency to withdraw from direct contact with the environment, called negative or withdrawal attitude, constitute a personality trait?
2. If attitude of withdrawal is shown to be a trait, how does it exhibit itself in the life history and present status of the individual?

II. *The Literature*

This survey is limited to the mention of references bearing upon the study of personality by tests such as the one employed in the present research. Data on the relationships between personality and other objective data will be discussed later in the second part of our study.

The present investigation employed an inventory belonging to the class known as adjustment questionnaires. Many studies have been made which have employed such a questionnaire. For the history of these investigations, the reader is referred to the excellent summary by Symonds (15). A questionnaire which we wish to treat in detail is the Individuality Record, devised by Lecky (11), the 1930 edition comprising 200 ques-

tions to be answered by Yes, No, or ?. In an unpublished study on approximately 500 Columbia College freshmen, Lecky divided the inventory into the following eight categories (see the Individuality Record, P. 9): social confidence, cooperation, attitude toward family, nervous symptoms, optimism, physical symptoms, attitude toward sex, and work habits. Two kinds of scores were determined for the questionnaire:

1. A total raw score, which is the sum of the number of "wrong" responses, indicative of what Lecky calls *negative attitude*.

2. Scores on each of the eight categories.

Lecky reports the reliability of the Record as .940. This reliability was determined by correlating odds against evens in each category, and raising the resulting figure by the Spearman-Brown formula. When odds and evens were correlated throughout the test as a whole, the reliability was found to be .937. Total raw scores for the group of freshmen studied ranged from 3 to 130. The average raw score was 35.5.

The eight categories were correlated with each other and with the total score. The intercorrelations were all positive. They ranged from .118 for that between attitude towards family and attitude towards sex, to .553 for that between confidence and cooperation. The discriminatory value of the categories, determined by the magnitude of the correlation between scores on each of the categories and total raw score, was from most to least discriminating as follows: 1. optimism, 2. work habits, 3. nervous symptoms, 4. social confidence, 5. cooperation, 6. physical symptoms, 7. attitude toward sex, 8. attitude towards family. On the basis of the array of intercorrelations and of the correlation of each category with the total score, Lecky concludes that the inventory as a whole measures a homogeneity of behavior. It should be remarked that such an array of intercorrelations is scarcely a rigorous criterion of the existence of a trait.

CHAPTER II

PROCEDURE

With Lecky's work (11) and a preliminary analysis made by us of his data as a point of reference, the present study was undertaken. The analysis of Lecky's data was made merely as a kind of orientation study, and therefore is not reported here. The facts given below pertain to the present investigation.

1. *Subjects*

The subjects were 209 women pursuing courses of elementary psychology at Barnard College, New York City, during the winter and spring semesters of the academic year 1931-1932. The majority, about three-quarters, were freshmen, the others being upperclassmen. With four exceptions their ages fell within the limits 16 years, 7 months to 24 years, 4 months. The group as a whole was therefore fairly homogeneous, the ages not deviating much, if at all, from those generally found among college students.

2. *Testing Materials*

a. Lecky's Individuality Record (11), the same questionnaire employed by him in the study of Columbia College freshmen. The paragraph following the 200th question was not answered by our subjects.

b. A short inventory, devised by the author, and designated for convenience, the Personal Data Sheet. This questionnaire aims at eliciting from the subjects supplementary information concerning certain facts of their life history.

c. A vocabulary test, which is a multiple choice test of 160 words, difficult enough for college groups (12).

d. Ten rating scales devised by the present writer. The traits to be rated were: 1. beauty, 2. health, 3. popularity, 4. optimism, 5. nervousness, 6. temperament, 7. attitude towards sex, 8. attitude towards family, 9. work habits, 10. social confidence.

e. Physical Measures: 1. height in inches, 2. weight in pounds, 3. strength of grip in pounds, 4. vital index, 5. health rating, A, B, C, and D grades in order of excellence.

The Individuality Record, Personal Data Sheet, and one of the rating scales are shown in Figs. 1, 2, and 3. The other nine

FIGURE I

Prescott Lecky
Columbia University
New York City

INDIVIDUALITY RECORD

The Columbia University Press
New York City

Name
(Last name) (First name) (Middle name)

The following questions have been prepared in order that we may obtain a picture of each student as a distinct individual. Everyone differs from everyone else in his personal history, his attitude toward life, and his combination of characteristics. Therefore, before intelligent advice and help can be given, these individual factors must be considered as well as the student's training and scholarship.

The value of the study, and its benefit to you, depends on your frankness and coöperation. No advantage is gained by giving a picture that is not true, or by allowing your answers to be guided by any ideal standard, for that would defeat the purpose of the record. Simply state the facts to the best of your knowledge, indicating which of the statements mentioned are true in your particular case.

Each question is answered by **drawing a ring** around that one of the three choices (**Yes**, **No**, or **?**) which represents the correct answer. The question mark is included for use in those cases which cannot be decided one way or the other. Since the questions have been prepared very carefully, however, we believe that most of them can be answered with a definite **Yes** or **No**.

- | | |
|---|--|
| C <input checked="" type="radio"/> yes <input type="radio"/> no ? Do you get stage fright? | C <input checked="" type="radio"/> yes <input type="radio"/> no ? Do you have difficulty in starting conversation with a stranger? |
| N <input checked="" type="radio"/> yes <input type="radio"/> no ? Have you ever had the habit of stuttering? | C <input checked="" type="radio"/> yes <input type="radio"/> no ? Do you find it difficult to get rid of a salesman? |
| P <input checked="" type="radio"/> yes <input type="radio"/> no ? Do you usually sleep well? | C <input checked="" type="radio"/> yes <input type="radio"/> no ? Do you keep in the background on social occasions? |
| P <input checked="" type="radio"/> yes <input type="radio"/> no ? Have you any physical defects? | N <input checked="" type="radio"/> yes <input type="radio"/> no ? Are you ever bothered by a feeling that things are not real? |
| P <input checked="" type="radio"/> yes <input type="radio"/> no ? Do you have headaches at the back of the head? | N <input checked="" type="radio"/> yes <input type="radio"/> no ? Does it make you uneasy to go into a tunnel or subway? |
| P <input checked="" type="radio"/> yes <input type="radio"/> no ? Are you troubled much by constipation? | C <input checked="" type="radio"/> yes <input type="radio"/> no ? Are you troubled with shyness? |
| P <input checked="" type="radio"/> yes <input type="radio"/> no ? Does your heart sometimes sound in your ears so that you cannot sleep? | C <input checked="" type="radio"/> yes <input type="radio"/> no ? Does it bother you to have people watch you at work even when you do it well? |
| C <input checked="" type="radio"/> yes <input type="radio"/> no ? Do you take responsibility for introducing people at a party? | C <input checked="" type="radio"/> yes <input type="radio"/> no ? Can you stand kidding? |
| P <input checked="" type="radio"/> yes <input type="radio"/> no ? Since you were five years old have you ever had the habit of wetting the bed? | N <input checked="" type="radio"/> yes <input type="radio"/> no ? Do you have a great fear of fire? |
| C <input checked="" type="radio"/> yes <input type="radio"/> no ? Are your feelings easily hurt? | C <input checked="" type="radio"/> yes <input type="radio"/> no ? Do you often feel you do not get your chance in social conversation? |
| N <input checked="" type="radio"/> yes <input type="radio"/> no ? Have you ever had a nervous breakdown? | P <input checked="" type="radio"/> yes <input type="radio"/> no ? Are you troubled with poor health? |
| N <input checked="" type="radio"/> yes <input type="radio"/> no ? Are you afraid of falling when you are on a high place? | C <input checked="" type="radio"/> yes <input type="radio"/> no ? Do you feel self-conscious when you recite in class? |
| N <input checked="" type="radio"/> yes <input type="radio"/> no ? Do you consider yourself a rather nervous person? | N <input checked="" type="radio"/> yes <input type="radio"/> no ? Does some particular useless thought keep coming into your mind to bother you? |
| C <input checked="" type="radio"/> yes <input type="radio"/> no ? Do you often feel lonesome, even when you are with other people? | N <input checked="" type="radio"/> yes <input type="radio"/> no ? Have you ever had the habit of twitching your face, neck, or shoulders? |
| C <input checked="" type="radio"/> yes <input type="radio"/> no ? Are you sometimes the leader at a social affair? | P <input checked="" type="radio"/> yes <input type="radio"/> no ? Do you feel well rested in the morning? |
| N <input checked="" type="radio"/> yes <input type="radio"/> no ? Do you lose your head easily in a dangerous situation? | N <input checked="" type="radio"/> yes <input type="radio"/> no ? At night are you frequently troubled by the idea that somebody is following you? |

- S ☒ yes ☐ no ? Do you enjoy going to dances?
- W ☒ yes ☐ no ? Are you absent minded?
- S ☒ yes ☐ no ? Do you expect to get married?
- Co ☒ yes ☐ no ? Do you usually control your temper?
- F ☒ yes ☐ no ? Have your relationships with your mother always been pleasant?
- O ☒ yes ☐ no ? Do you feel that life is a great burden?
- F ☒ yes ☐ no ? Do you get on well with your brothers and sisters?
- Co ☒ yes ☐ no ? Do you think most people are self-seeking or malicious?
- Co ☒ yes ☐ no ? Do you feel slightly antagonistic toward the majority of people you meet?
- O ☒ yes ☐ no ? Do you worry too long over humiliating experiences?
- Co ☒ yes ☐ no ? Are you careful not to say things to hurt people's feelings?
- F ☒ yes ☐ no ? Do you love your father more than your mother?
- C ☒ yes ☐ no ? Are you interested in meeting a lot of different kinds of people?
- N ☒ yes ☐ no ? Do a great many things frighten you?
- S ☒ yes ☐ no ? Have you ever believed you were falling in love?
- F ☒ yes ☐ no ? Do you feel that your parents interfere too much in your personal affairs?
- S ☒ yes ☐ no ? Are you easily shocked by sexual topics, *risque* stories, and the like?
- N ☒ yes ☐ no ? Do ideas often run through your head so that you cannot sleep?
- W ☒ yes ☐ no ? Do you have the habit of leaving a lot of tasks unfinished?
- C ☒ yes ☐ no ? Have you found books more interesting than people?
- P ☒ yes ☐ no ? Are you frequently bothered by indigestion?
- Co ☒ yes ☐ no ? Are there many people that you dislike intensely?
- P ☒ yes ☐ no ? Do you ever feel an awful pressure in or about the head?
- N ☒ yes ☐ no ? Are you usually cool and composed in a dangerous situation?
- O ☒ yes ☐ no ? Are you frequently burdened by a sense of remorse?
- N ☒ yes ☐ no ? Can you sit still without fidgeting?
- Co ☒ yes ☐ no ? Do you usually trust people?
- Co ☒ yes ☐ no ? Do you lose your temper quickly?
- F ☒ yes ☐ no ? Is your mother's nature usually cheerful?
- O ☒ yes ☐ no ? Do you worry over possible misfortunes?
- P ☒ yes ☐ no ? Do you usually feel fatigued when you wake up in the morning?
- N ☒ yes ☐ no ? Are you often afraid of contracting disease?
- N ☒ yes ☐ no ? Are you frequently worried about religion?
- P ☒ yes ☐ no ? Do you like indoor sports better than outdoor sports?
- Co ☒ yes ☐ no ? Do people find fault with you more than you deserve?
- P ☒ yes ☐ no ? Do you find it necessary to watch your health carefully?
- N ☒ yes ☐ no ? Are you often frightened in the middle of the night?
- S ☒ yes ☐ no ? Have you ever worried much about questions of sex?
- F ☒ yes ☐ no ? Do you think that your parents expect too much of you?
- N ☒ yes ☐ no ? Does it make you uneasy to sit in a small room with the door shut?
- P ☒ yes ☐ no ? Do you often have bad pains in any part of your body?
- Co ☒ yes ☐ no ? Do you know of anybody who is trying to do you harm?
- F ☒ yes ☐ no ? Were your parents partial to any of your brothers or sisters?
- C ☒ yes ☐ no ? If you come late to a meeting would you rather stand or leave than take a front seat?
- W ☒ yes ☐ no ? Do you day-dream frequently?
- F ☒ yes ☐ no ? Did you have a happy childhood?
- N ☒ yes ☐ no ? Have you ever been afraid that you might jump off when you were on a high place?
- F ☒ yes ☐ no ? Were you your parents' favorite child?
- O ☒ yes ☐ no ? Do you get discouraged easily?
- F ☒ yes ☐ no ? Have your relationships with your father always been pleasant?
- P ☒ yes ☐ no ? Do you have a great many bad headaches?
- Co ☒ yes ☐ no ? Is there anyone you want to get even with?
- N ☒ yes ☐ no ? Does it make you uneasy to cross a bridge over a river?
- W ☒ yes ☐ no ? Do your interests change quickly?
- F ☒ yes ☐ no ? Did you ever have a strong desire to run away from home?
- C ☒ yes ☐ no ? Do you like to be by yourself a great deal?
- O ☒ yes ☐ no ? Are you easily moved to tears?
- C ☒ yes ☐ no ? Do you allow people to crowd ahead in line?
- N ☒ yes ☐ no ? Do you dread the sight of a snake?
- P ☒ yes ☐ no ? Did you ever have heart trouble?
- S ☒ yes ☐ no ? Do you limit your friendships mostly to your own sex?
- W ☒ yes ☐ no ? Are you inclined to let things go until the last minute?
- Co ☒ yes ☐ no ? Do you think that most people are dull and uninteresting?
- W ☒ yes ☐ no ? Do you like to take on responsibilities?
- C ☒ yes ☐ no ? Can you stand criticism without feeling hurt?
- C ☒ yes ☐ no ? Do you have difficulty in making friends?

- N ☒ yes ☐ no ? Are you troubled with the idea that people are watching you on the street?
- W ☒ yes ☐ no ? Can you do the little chores of the day without worrying over them?
- F ☒ yes ☐ no ? Have you been the scapegoat in the family life?
- N ☒ yes ☐ no ? Does your mind often wander badly so that you lose track of what you are doing?
- P ☒ yes ☐ no ? Do your eyes often pain you?
- Co ☒ yes ☐ no ? Have your teachers generally treated you right?
- P ☒ yes ☐ no ? Do you feel tired most of the time?
- Co ☒ yes ☐ no ? Do you have the habit of contradicting people?
- P ☒ yes ☐ no ? Do you prefer participation in competitive intellectual amusements to athletic games?
- F ☒ yes ☐ no ? Were your parents happily married?
- O ☒ yes ☐ no ? Have you ever been depressed because of low marks in school?
- S ☒ yes ☐ no ? Would you say that you are more or less ignorant of sex?
- Co ☒ yes ☐ no ? Are you touchy on various subjects?
- S ☒ yes ☐ no ? Do you believe most marriages are happy?
- F ☒ yes ☐ no ? Are your parents inclined to be quite critical?
- S ☒ yes ☐ no ? Would you say that you are cynical about members of the opposite sex generally?
- O ☒ yes ☐ no ? Are you troubled by thoughts of death?
- S ☒ yes ☐ no ? Do you find it difficult to pass urine in the presence of others?
- O ☒ yes ☐ no ? Have your friends ever turned against you?
- P ☒ yes ☐ no ? Are you physically inferior to your associates?
- S ☒ yes ☐ no ? Is there a conflict in your nature between sex and morality?
- Co ☒ yes ☐ no ? Do you frequently feel grouchy?
- C ☒ yes ☐ no ? Do you like to be with other people a great deal?
- C ☒ yes ☐ no ? Are you usually in good spirits?
- Co ☒ yes ☐ no ? Do you think people have made quite a lot of fun of you?
- P ☒ yes ☐ no ? Have you been bothered by vomiting?
- P ☒ yes ☐ no ? Is your mother dissatisfied with her lot in life?
- O ☒ yes ☐ no ? Do things often go wrong for you by no fault of your own?
- C ☒ yes ☐ no ? At a reception or tea do you seek to meet the important person present?
- N ☒ yes ☐ no ? Do you ever have a queer feeling as if you were not your old self?
- O ☒ yes ☐ no ? Do you often feel just miserable?
- C ☒ yes ☐ no ? Are you bothered much by blushing?
- I' ☒ yes ☐ no ? Are you a "crank" about food?
- N ☒ yes ☐ no ? Do you get upset easily?
- F ☒ yes ☐ no ? Do you love your mother more than your father?
- N ☒ yes ☐ no ? Are you frequently troubled with nightmares?
- S ☒ yes ☐ no ? Looking toward the future, do you expect to have children?
- C ☒ yes ☐ no ? Do you hesitate to volunteer in a class recitation?
- I' ☒ yes ☐ no ? Do you usually feel well and strong?
- W ☒ yes ☐ no ? Do you get tired of work quickly?
- Co ☒ yes ☐ no ? Do you frequently feel that you deserve a better lot than you have?
- W ☒ yes ☐ no ? Are you systematic in caring for your personal property?
- O ☒ yes ☐ no ? Are you frequently in low spirits?
- C ☒ yes ☐ no ? Do you enjoy social gatherings just to be with people?
- S ☒ yes ☐ no ? Are you shy with boys?
- S ☒ yes ☐ no ? Are you shy with girls?
- C ☒ yes ☐ no ? Do you mind having your friends see you in the ten-cent store?
- O ☒ yes ☐ no ? Do you feel that you are not satisfactorily adjusted to life?
- O ☒ yes ☐ no ? Do you often experience periods of loneliness?
- W ☒ yes ☐ no ? Does criticism disturb you badly?
- C ☒ yes ☐ no ? Do you ever take the lead to enliven a dull party?
- C ☒ yes ☐ no ? Do you often feel self-conscious in the presence of superiors?
- Co ☒ yes ☐ no ? Do you get tired of people quickly?
- I' ☒ yes ☐ no ? Would you rather work indoors than outdoors?
- O ☒ yes ☐ no ? Do you lack self-confidence?
- O ☒ yes ☐ no ? Do you think you are usually unlucky?
- C ☒ yes ☐ no ? Do you find it difficult to speak in public?
- F ☒ yes ☐ no ? Was your mother the dominant member of the family?
- P ☒ yes ☐ no ? Do you sometimes have shooting pains in the head?
- P ☒ yes ☐ no ? Do you often have queer, unpleasant feelings in any part of your body?
- W ☒ yes ☐ no ? Do you usually plan your work ahead?
- N ☒ yes ☐ no ? Are you frightened by lightning?
- C ☒ yes ☐ no ? Do you often feel self-conscious because of your personal appearance?
- W ☒ yes ☐ no ? Do you feel you must do a thing over several times before you leave it?
- N ☒ yes ☐ no ? Does it make you uneasy to have to cross a wide street or open square?

- O ☒ **yes** ☐ **no** ? Are you troubled with feelings of inferiority?
- W ☒ **yes** ☐ **no** ? Do you often find that you cannot make up your mind until the time for action has passed?
- P ☒ **yes** ☐ **no** ? Do you often have the feeling of suffocating?
- S ☒ **yes** ☐ **no** ? Are you generally regarded as indifferent to the opposite sex?
- Co ☒ **yes** ☐ **no** ? Do you think you are regarded as critical of other people?
- N ☒ **yes** ☐ **no** ? Do you have ups and downs in mood without apparent cause?
- Co ☒ **yes** ☐ **no** ? Do you let yourself go when angry?
- P ☒ **yes** ☐ **no** ? Do things ever swim or get misty before your eyes?
- P ☒ **yes** ☐ **no** ? Have you a good appetite?
- F ☒ **yes** ☐ **no** ? Is your home environment happy?
- P ☒ **yes** ☐ **no** ? Are you bothered by fluttering of the heart?
- W ☒ **yes** ☐ **no** ? Are you slow in making decisions?
- F ☒ **yes** ☐ **no** ? Has your family always treated you right?
- W ☒ **yes** ☐ **no** ? Are you in general self-confident about your abilities?
- F ☒ **yes** ☐ **no** ? Do you occasionally have conflicting moods of love and hate for members of your family?
- S ☒ **yes** ☐ **no** ? Have you any friends of the opposite sex who seem worthy of your confidence?
- O ☒ **yes** ☐ **no** ? Would you say that you had experienced a good many failures?
- S ☒ **yes** ☐ **no** ? Were you greatly shocked when you learned the facts about sex?
- W ☒ **yes** ☐ **no** ? Does it disturb you to think that someone else may get a better mark than you?
- C ☒ **yes** ☐ **no** ? Do you mix with other students easily?
- S ☒ **yes** ☐ **no** ? Did childhood misinformation delay you in developing a normal attitude toward sex problems?
- Co ☒ **yes** ☐ **no** ? Are most of the people you know rather bigoted and narrow-minded?
- S ☒ **yes** ☐ **no** ? Do you think you are less attractive than other boys (or girls)?
- W ☒ **yes** ☐ **no** ? Do you have trouble deciding what to do next?
- C ☒ **yes** ☐ **no** ? Do you feel pretty confident that your classmates accept you as an equal?
- S ☒ **yes** ☐ **no** ? Do you believe all normal people should marry?
- W ☒ **yes** ☐ **no** ? Do you ever get so discouraged that you cannot work properly?
- Co ☒ **yes** ☐ **no** ? Do you meet a great many people who bore you?
- W ☒ **yes** ☐ **no** ? Do you make a large number of plans which you never carry out?
- F ☒ **yes** ☐ **no** ? Do your parents give you credit for having good judgment?
- C ☒ **yes** ☐ **no** ? Do you lack self-confidence in social situations?
- O ☒ **yes** ☐ **no** ? Have you had a good deal of bad luck?
- W ☒ **yes** ☐ **no** ? Are you considered lazy?
- S ☒ **yes** ☐ **no** ? Do you think of sex as something dangerous?
- F ☒ **yes** ☐ **no** ? Do your parents give you reasonable freedom in making your own decisions?
- O ☒ **yes** ☐ **no** ? Are you cheerful and optimistic about the future?
- O ☒ **yes** ☐ **no** ? Do you occasionally feel sorry for yourself?

Please fill in the following information:

Position in family..... Sex.....
(First of three, second of four, etc.)

Religion..... Race..... Height.....

Was your father born in the United States?..... Your mother?.....

What business or occupation do you expect to enter?.....

Was most of your childhood spent in the country, a village or a city?.....

Are you right-handed, left-handed or ambidextrous?.....

Give the order of birth of the children in your family according to sex. Draw a ring around yourself.

For example, if you were second in a family of three, with two sisters, the record would read 1. Girl (2. Boy) 3. Girl.

.....

Signature.....

rating scales are all 7 point scales similar to the one shown. On the Individuality Record we have indicated by a circle the withdrawal responses, and by letters the category to which each belongs. C represents social confidence, Co cooperation, F attitude towards family, N nervous symptoms, O optimism, P physical symptoms, S attitude towards sex, and W work habits.

3. Sequence of Obtaining Data

The Individuality Record was administered to the various sections of psychology, four in the winter session, four in the spring term, during a regular class period. After this questionnaire had been answered, the Personal Data sheets were distributed and answered. In every section, at the beginning of the hour the investigator was introduced to the class by the instructor, who stressed the relevance of the testing to the subject matter of the course. Such an introduction tended to minimize the levity and indifference which would have arisen if the students had got the idea that the project was something extraneous to their course in psychology.

As a further insurance against the arousal of such an attitude, and further to guarantee cooperation of the subjects with the investigator, a few brief remarks were made by the experimenter prior to the distribution of the Individuality Records among the subjects. The nature of the remarks made was as follows: 1. The subjects were informed that their replies were to be used in a scientific research. 2. A promise was given that the responses and scores on the test would be entirely confidential, only the individual subject and the experimenter being cognizant of the results. 3. The subjects were earnestly requested to answer the questions without soliciting aid from other subjects, to give their replies without undue deliberation on any of the questions, and to be sure not to omit any question. 4. The subjects were informed that after they had completed the answers to both questionnaires and had submitted their papers, the investigator would speak briefly to the class on the purpose of the research.

Half an hour was found to be ample time for answering both questionnaires, and many subjects completed the inventories in less time. During the last ten minutes of the hour, in accordance with the promise given, a simple explanation of the nature of the study was made, in the hope that this would

FIGURE II

PERSONAL DATA SHEET

Kindly answer the following questions, being as specific as possible in every case. Your answers will be kept entirely confidential.

- 1) Name
- 2) Date of birth: Day Month Year
- 3) In what subject do you intend to major while in college?
- 4) What vocation are you most interested in entering when you leave college?
- 5) Please indicate the extent of your father's education by encircling the correct answer to each of the following. Is he a graduate of:

a) Elementary school	Yes	No
b) High school	Yes	No
c) College	Yes	No
d) A professional school	Yes	No
- 6) What degree, or degrees, if any, does he hold?
- 7) Please indicate the extent of your mother's education by encircling the correct answer to each of the following. Is she a graduate of:

a) Elementary school	Yes	No
b) High school	Yes	No
c) Normal school	Yes	No
d) College	Yes	No
e) A professional school	Yes	No
- 8) What degree, or degrees, if any, does she hold?
- 9) What is your father's occupation?
 Be specific, as for example: traveling salesman, life insurance salesman, criminal lawyer, corporation lawyer, physician, surgeon, mechanical engineer, small shop keeper, officer manager, etc.
- 10) What position do you hold in your family as regards birth?
 Are you an only child, first born, second, etc.?
- 11) How many children are there in your family, including yourself?
- 12) Have you any brothers?
 How many?
- 13) What is your religious preference?
 Be specific, as for example, Roman Catholic, Methodist, Jew, Christian Scientist, etc.
- 14) What is your political preference?

furnish or strengthen interest in the problem, so that the subjects would willingly cooperate in other tasks to be demanded of them by the experimenter.

The vocabulary test was likewise administered during a regular class period. The tests were issued at the beginning of the hour, the experimenter reading the directions with the subjects. The testees were then informed that they would have the entire 50-minute class period in which to answer the test. In all sections of psychology, the test was given subsequent to the two personality questionnaires. In two of the classes, one the first and the other the second term, the test was administered by the class instructor. All other sections received it from the experimenter.

At a still later date, the exact time varying somewhat with the different classes, the experimenter again appeared before the subjects, assembled in their respective sections, to request them to cooperate in the project of rating. The subjects were asked to give the investigator the names of three people whom they knew best in either that particular section of psychology or in any of the other sections of elementary psychology. They were likewise to choose, from a number of available hours, half an hour during which they would go to the office of the experimenter to rate the associates whose names they gave. As a motivation in keeping the appointment, they were informed that subsequent to the completion of the ratings they would be permitted to see, if interested, the scores on their Individuality Record.

The subjects reported individually to the experimenter for the task of rating. It was emphasized by the experimenter that the assessments would be held entirely confidential, and that the rater was to use her own judgment in making the ratings, not to ask advice from any others who might at the time be present in the room appraising the same or other individuals. In addition to rating associates, each subject also rated herself. Knowledge of the scales was withheld from the subjects until they appeared to perform the ratings. The rating scales were stapled together in the following order: beauty, health, popularity, optimism, nervousness, temperament, attitude towards sex, attitude towards family, work habits, and social confidence. It seemed best to begin with a fairly objective trait such as beauty, so that the rater would not become over-conscientious about imputing undesirable attributes to the ratee.

Were we to commence with such a trait as attitude towards family or sex, the rater might plead to be excused from the task of rating. Just what effect, if any, results from presenting the scales in the chosen order is unknown. At least it can be said that the presentation was standard for the various raters.

From the office of the Department of Physical Education at Barnard College we obtained the physical measures referred to above. Records were not obtainable on all 209 subjects, since some of these were upper classmen who had not been examined since the end of their freshman year. It was deemed best not to use for some subjects recent physical measurements, and for other subjects measurements made over a year ago. We therefore used only records made during the autumn of 1931. The subjects for whom we had physical measurements were in most cases freshmen, but in a few instances transfers to Barnard from other institutions.

4. Conditions of Testing

The conditions of testing were good. The subjects responded willingly to the undertaking, many of them not only requesting their scores on the quantitative tests, but also evincing eagerness to learn more concerning the investigation than had been told them in the cursory talk which followed the answering of the Individuality Record and Personal Data Sheet. The administration of the questionnaires, vocabulary test, and ratings was always personally supervised by the experimenter with the exception of the vocabulary test given to two sections by the class instructor. Close observation of the subjects revealed no instance of behavior on the part of the subject which would vitiate our results. To be sure, there were some subjects who showed hesitancy in rating associates, but there were none who refused to appraise those whom they knew, when the confidential nature of the ratings was made clear to them. Most subjects were very conscientious in keeping their appointments to perform the ratings and in following the directions given them.

5. Scoring

a. The Individuality Record

This was scored using the same key as Lecky (11) employed to obtain two kinds of scores. (See P. 9.) The first score, it

will be recalled is a total raw score; the second scores are those for the various categories, social confidence, cooperation, etc.

b. Personal Data Sheet

1. Age was computed in months, any number of days equal to or exceeding half a month being counted as an extra month.

2. College-Major.

The classification of majors was necessarily arbitrary. The following groupings were finally chosen:

- a. Languages, comprising Latin, Greek, French, Spanish, German, English, and journalism.
- b. Social Sciences, including history, economics, anthropology, government, sociology, psychology, and philosophy.
- c. Natural Sciences, among which are numbered chemistry, physics, zoology, botany, and astronomy.
- d. Fine Arts.
- e. Mathematics.
- f. Business.
- g. Undecided.

3. Vocational Choice.

The following categories subsume the choices:

- a. Teaching.
- b. Literature, comprising journalism, writing, literary criticism, editing, publishing, library work.
- c. Business, including selling, secretaryship, advertising, banking.
- d. Science, including research work, pharmacy, medicine, sociological work, architecture, and statistics.
- e. Social Service, comprising social work, nursing, child welfare, juvenile court psychologist.
- f. Undecided.

4. Father's Occupation.

Broad categories of occupational level were used, following Taussig's Classification (16):

- a. Professional.
- b. Semi-professional a and b classes.
- c. Skilled labor.

5. Religious Preference.

Four rubrics were employed:

- a. Protestant.
- b. Roman Catholic.
- c. Jew.
- d. None.

6. Political Preference.

Four categories were used:

- a. Republican.
- b. Democrat.
- c. Socialist.
- d. None.

c. Vocabulary Test

This test was scored in terms of the number of errors made. Only one response was correct out of the five possible choices, so that no partial credits were possible. For every incorrect response one point was added to the subject's score.

d. Rating Scales

The statistical treatment of the rating scales is discussed in the section dealing with the validity of the Individuality Record.

CHAPTER III

RESULTS

Evidence for the Homogeneity of the Attitude of Withdrawal

The results of the investigation will be presented in two different sections. The first will show evidence to justify the concept of withdrawal attitude as a personality trait. The second will treat the relationships found between measures of this trait and other data which were gathered in this investigation. The results in the first section comprise the statistical treatment of data obtained from our total group of 209 subjects.

I. Statistical Results for the Individuality Record

Table I summarizes the chief results obtained upon the Individuality Record.² The reliability of the total test was computed by correlating odds against evens, and raising the resulting coefficient by the Spearman-Brown prophecy formula, to give the reliability of the whole test. In order to determine the reliabilities of the subparts of the test, we substituted the length of the subpart as a fraction of the length of the total test in the prophecy formula. The categories were taken as the following fractions of the total:³

Social Confidence 1/6, Cooperation 1/10, Attitude towards Family 1/10, Nervous Symptoms 1/7, Optimism 1/10, Physical Symptoms 1/7, Attitude towards Sex 1/10, Work Habits 1/10.

The range 6—104 gives a rough estimate of the enormous individual differences existing in our group. Another interesting finding is the skewness of the several distributions (2). With one exception, work habits, the sign of the skewness is negative. According to the formula used, the negative sign indicates a piling up of scores at the lower end of the distribution. More individuals show an absence of withdrawal attitude

² The averages, standard deviations, and reliability of the total test were computed by the Statistical Bureau of Columbia University. The other figures were determined by the writer.

³ For example, there are 34 questions in the category of social confidence; $\frac{34}{200} =$ approximately 1/6. For cooperation, $\frac{22}{200} = 1/10$, etc.

TABLE I
STATISTICAL RESULTS FOR THE INDIVIDUALITY RECORD

Test	No. of Items	Range of Scores	Average	S.D.	Sk.*	Sk.		Reliability
						σ Sk.	σ Sk.	
<i>Individuality Record</i>								
Social Confidence	34	0-32	10.5120	6.6671	-2.0869	.6442	-3.2395	.7324
Cooperation	22	0-17	3.3397	3.1372	-1.2000	.2708	-4.4313	.6220
Attitude towards Family	22	0-18	3.8038	3.5114	-1.2829	.3019	-4.2494	.6220
Nervous Symptoms	30	0-15	5.2153	3.3924	-0.6736	.3138	-2.1466	.7023
Optimism	21	0-17	5.7321	3.8655	-1.1079	.3653	-3.0328	.6220
Physical Symptoms	30	0-17	3.3206	3.1543	-1.3496	.2797	-4.8252	.7023
Attitude towards Sex	21	0-16	3.9904	3.0420	-0.9464	.2661	-3.5686	.6220
Work Habits	20	0-18	6.4163	3.7828	0.2723	.3424	0.7953	.6220
Total Score	200	6-104	42.3301	20.6322	-4.7165	1.8071	-2.6100	.9427

N = 209

*Formula: $Sk. = P_{.40} - \frac{1}{2} (P_{.90} + P_{.10})$ has been used

than its presence on a particular category. This may result from the fact that the group is selected. The positive skewness found for work habits is slight. The category of work habits, indeed, gives the most nearly normal distribution of all the categories. It would seem that for the test to yield normal distributions on the subparts and total it would be necessary to include more questions concerning situations where a mild degree of withdrawal attitude is possible. Such questions, however, would probably not differentiate sharply between decidedly negative or reclusive, and decidedly positive individuals. Hence it is likely that for this reason they were not included in the inventory.

The reliabilities of the test are fairly satisfactory. The total questionnaire has a reliability of .9427. The subparts range in reliability from .6220 to .7324.

II. *Correlations of the Categories with Each Other, with Age, and with Total Score*

The existence of a generalized or homogeneous attitude of withdrawal is suggested by the intercorrelations of ten variables which consist of the eight categories, total score, and age. Table II shows these intercorrelations, Table III their probable errors. The most significant points to be noted regarding the intercorrelations are as follows:

1. All correlations are positive.
2. Omitting age from our consideration, for the moment, and observing only the intercorrelations of the categories, we find that the coefficients range from .1496, the correlation of social confidence with attitude towards family, to .5646, that between social confidence and attitude toward sex.
3. The relationship between the score on each of the categories and total score is likewise interesting. The rank order of correlation from highest to lowest is as follows: optimism, social confidence, work habits, cooperation, nervous symptoms, attitude towards sex, physical symptoms, and attitude towards family. This varies somewhat from the order found by Lecky (11), but in general is quite similar. Optimism correlates most highly with total score and may therefore be considered most representative of the whole inventory. It might be well to remind the reader that all

the correlations between category and total score are spuriously high, because the total score includes responses on questions in the category with which the total score is being correlated. It is still permissible, however, to consider the rank order of correlation as significant, since the categories are of approximately the same length.

4. The correlation of subparts of the inventory with age is in every case small. The largest is that between physical symptoms and age. A slight tendency exists for older subjects to report more physical symptoms than younger ones. Perhaps we might conjecture that physical disabilities are a possible explanation why such subjects are in college at an age above that of other students. The predictive value of this correlation coefficient is, of course, practically nil. In general, the correlations with age are negligibly small, so that it did not seem necessary to partial out age from the array of coefficients before proceeding with further statistical analyses of the data.

III. *Tetrad Analysis*

In order to discover whether the attitude of withdrawal is generalized, so that we can speak of it as a trait, Spearman's tetrad difference criterion was applied to the intercorrelations of the categories (13). If each tetrad difference, arising from the intercorrelations, is zero within four times the P.E., the existence of a generalized factor plus factors specific to the individual categories is demonstrated. In a preliminary analysis of the data, Spearman's summary method of analysis was used (13). Instead of determining the P.E. for each individual tetrad difference, the observed median of the tetrad differences was computed, and compared with the theoretical P.E. of the distribution. This theoretical P.E. multiplied by four gives the limits within which, due to chance errors, the tetrads may be expected to vary from zero. A good many of the tetrad differences in our data failed to satisfy the criterion. Inspection of these large tetrad differences leads to the conclusion that certain linkages exist between some of the categories. These linkages represent minor group factors (9). Since we are interested only in the presence or absence of a generalized attitude of withdrawal, it is unnecessary to report the findings upon the preliminary analysis.

The total questionnaire was divided into different batteries.

The first consists of categories 1, 2, 3, 4, which in the order given are social confidence, cooperation, attitude towards family, and nervous symptoms. The second comprises categories 5, 6, 7, 8, which are respectively optimism, physical symptoms, attitude toward sex, and work habits. Neither within Battery I nor Battery II are there included variables, which through the preliminary tetrad analysis we have been led to believe represent minor group factors. The tetrads show that there is a common factor in Battery I and a common factor in Battery II. If it can be shown that another battery composed of two categories from the first battery and two from the second also satisfies the tetrad criterion, then it has been demonstrated that what is general to Battery I is also what is general to Battery II. Table IV shows the individual tetrads and

TABLE IV
TETRADS AND P.E.'S FOR THE BATTERIES

Battery	<i>t</i> 1234	P.E.	<i>t</i> 1243	P.E.	<i>t</i> 1342	P.E.
I (1234)	.0327	±.0210	— .0068	±.0218	— .0395	±.0218
II (5678)	— .0119	±.0259	.0088	±.0275	.0207	±.0283
III (3478)	.0033	±.0251	.0386	±.0158	.0353	±.0212
IV (1567)	.0011	±.0163	— .1226	±.0301	— .1237	±.0269
V (1457)	.0325	±.0103	— .1978	±.0328	— .2303	±.0330

their P.E.'s for the three batteries. As far as actual size is concerned, the tetrads are all very small. Evaluation of the tetrads in terms of the P.E.'s (13) reveals no tetrad even three times as large as its P.E. Having shown, by the procedure of dividing the inventory into batteries, that the tetrad criterion is perfectly satisfied, we may now assert that there is a generalized attitude of withdrawal, which the Individuality Record measures. The factor central to Battery I and that general to Battery II are proved identical in Battery III, since it is composed of categories from the first and second batteries. It will be noticed that there are shown in Batteries IV and V large tetrad differences from other combinations than those used for the three batteries discussed above. These show the presence of linkages between certain of the categories.

IV. *Correlations of the Categories with the General Factor*

The establishment of a general factor among a group of tests does not indicate to what extent the common factor is

operative in any of the tests. In order to ascertain this relationship it is necessary to compute the correlation of the test with its general factor. Spearman's formula (13) for the correlation of a test with the factor common to it and a number of other tests is given by the formula:

$$r_{ag} = \sqrt{\frac{r_{ab} r_{ac}}{r_{bc}}}$$

In this study "g," the central factor of withdrawal attitude of Battery I is denoted by wa_1 , the "g" of Battery II is denoted by wa_2 , and that of Battery III by wa_3 . Each of the batteries contained four tests (categories), so that for each test of a battery three different values of $r_{a\ wa}$ are obtained, since three variables are used at a time in computing $r_{a\ wa}$. The three values obtained were in every case first transmuted into Fisher's z-function (4), then averaged, and the average finally transmuted again into r units. The correlations of the categories with the central factors are given in Table V. All the coeffi-

TABLE V
CORRELATIONS OF THE TESTS WITH THE PERSONALITY
FACTOR IN BATTERIES I, II AND III

Battery I	Battery II	Battery III
$r_1\ wa_1 = .4136$	$r_5\ wa_2 = .8917$	$r_3\ wa_3 = .4301$
$r_2\ wa_1 = .8275$	$r_6\ wa_2 = .4382$	$r_4\ wa_3 = .6044$
$r_3\ wa_1 = .4136$	$r_7\ wa_2 = .4382$	$r_7\ wa_3 = .3540$
$r_4\ wa_1 = .6469$	$r_8\ wa_2 = .6584$	$r_8\ wa_3 = .7779$

cients are sufficiently high to corroborate the previous demonstration of a common factor, wa , pervading the entire battery. Furthermore, the correlation of the tests with the central factor in one battery checks quite closely with their correlation in the other batteries. For example, $r_3\ wa_1$ of Battery I correlates to the extent of .4136 with what is general to the battery; $r_3\ wa_3$ of Battery III correlates .4301 with its central factor. Similarly, observe the closeness with which $r_4\ wa_1$ and $r_4\ wa_3$ in Batteries I and III resemble each other. The correlations of 7 and 8 with the central factors of Batteries II and III are not quite so consistent, but they are sufficiently alike to corroborate the conclusion that attitude of withdrawal is generalized.

*V. Regression Equations and Multiple Correlations of
Batteries I and II With Their General Factors*

In order to estimate what is general to Batteries I and II, the multiple regression equations for these two batteries were computed. For the criterion scores a mean of 50 and σ of 10 were assumed. The variables used in the regression equation for Battery I are as follows:

X_0 = score in wa_1 , the central factor of withdrawal attitude as found in the first four categories.

X_1 = social confidence

X_3 = attitude towards family

X_2 = cooperation

X_4 = nervous symptoms

The values obtained for the coefficients are as follows:

$$X_0 = .132659 X_1 + 1.988719 X_2 + .235368 X_3 + .950298 X_4 + 36.112382$$

For Battery II the variables are:

X_0 = score in wa_2 , the central factor of withdrawal attitude, as found in the second four categories.

X_5 = optimism

X_7 = attitude towards sex

X_6 = physical symptoms

X_8 = work habits

The regression equation is as follows:

$$X_0 = 1.830906 X_5 + .281352 X_6 + .234770 X_7 + .572748 X_8 + 33.959058$$

The multiple correlations of Batteries I and II with the general personality factor were found to be:⁴

$$R_{wa_1} (1234) = .8920 \quad R_{wa_2} (5678) = .9187 \quad R_{wa_2} (3478) = .8506$$

Since the personality factors of Batteries I and II are presumably the same, it is desirable to check the result by determining the degree of relationship between the two personality factors, as far as we are able to predict it by means of the two regression equations. For each subject, from these equations two scores were predicted, one for the wa_1 of Battery I, the second for the wa_2 of Battery II. The correlation between these two measures, and other relationships are presented in Table

⁴The multiple regression equations and multiple correlations with the criterion, as well as the predicted scores in wa were computed by the Statistical Bureau of Columbia University.

VI.⁵ It will be noted that both raw and corrected coefficients are given for the correlation existing between the *wa* of the two batteries.

TABLE VI
INTERCORRELATIONS OF THE BATTERIES AND TOTAL SCORE

	Battery I	Battery II	Av. Battery I and Battery II	Total Raw Scores
	1	2	3	4
Sigma	8.9312	9.1798	8.3565	20.6322
Mean	50.0383	50.0287	50.2967	42.3301
	1.	.7003	.9188	.8385
		.8545*		
		2.	.9244	.8908
			3.	.9378

* r_{12} corrected for attenuation.
N = 209.

That the correlation between the two central factors, even when corrected for attenuation, is not perfect, as should theoretically be expected, may be explained as follows:

1. It should always be kept clearly in mind that to propose a general personality factor as a concept is not to hypostatise an entity like height or weight. Withdrawal attitude represents a way of behaving. If we employ different tests to measure this general factor, we may expect to obtain estimates for withdrawal attitude which vary from each other, although the mode of behavior which the tests measure may be fundamentally the same. Such is the case with the correlation between Battery I and II.

2. The regression equations of the tests in Batteries I and II with their respective *wa*'s do not measure the two *wa*'s precisely. This discrepancy in the measurement of *wa* within a battery may be adduced as an explanation of the imperfect correlation obtained between the two batteries.

Another interesting correlation shown in Table VII is that between the average of the wa_1 and wa_2 scores for the two batteries and the total raw score. That the total raw score might well be substituted for the scores based on the long and complicated regression equations is evidenced by the correlation of

⁵ The multiple correlation between the battery and the criterion gives the maximum degree of correlation between the fallible scores in *wa* and the theoretical "true" measure of withdrawal attitude. This correlation is therefore equivalent to the index of reliability of the battery. From the index of reliability for each battery the reliability coefficient was determined. (5) These reliability coefficients were then used to correct the correlation between Batteries I and II for attenuation. (5)

.9378 between the predicted score (average of scores for the two batteries) and total raw score. Manifestly, the factors specific to the various categories, chance errors as far as the general factor is concerned, cancel each other out, leaving in the total score nothing much more than the general personality factor.

The measure of withdrawal attitude used throughout the rest of this investigation is the average of the wa_1 and wa_2 scores. This average is denoted by the capital letters WA, to distinguish it from the withdrawal attitude scores for the separate batteries.

VI. *Validity of the Individuality Record*

Before proceeding to determine the validity of the Individuality Record as a measure of withdrawal attitude by comparing WA scores with associates' ratings for the attributes which the various categories represent, it was necessary to treat statistically the distribution of the ratings on the various scales. A decided tendency was shown for the subjects to rate both themselves and others toward the optimum end of the scale rather than about the average. The scale for nervousness runs in the opposite direction to that of the other scales, the optimum being below instead of above the average, so that no inconsistency in general trend is shown in judgments made on this scale.

Several hypotheses might be advanced to explain the skewness of the ratings. 1. The subjects were rating acquaintances and in some cases friends, toward whom they may have been loath to err in the direction of undervaluation. 2. The group of subjects was highly selected. For this reason we should not be surprised at skewness. Although the subjects, as college students, were not selected specifically on the basis of those characteristics included in the rating scales, inability to adapt, through excessive inferiority in many of these attributes, might easily be conceived as a reason for failure to enter or for withdrawal from college. 3. The raters were inexperienced. It might be assumed that under training at rating they would have given more normal distributions, if the average had been specifically defined as the average of the college population. 4. The tendency towards altruism in rating others, and towards overestimation of the self in desirable characteristics has been made mention of in psychological literature.

This might account for skewness apart from the other factors given above.

Since the point on the scales labelled average did not turn out to be the point at which the average ratee was placed by the rater, a correction for this displacement of the average by the raters was necessary. For self-ratings there was drawn up a frequency distribution of the ratings for the seven different points on the scale. From this we computed a new average, which is designated as the empirical average. This represents the point on the scale at which the average of the self-raters actually placed themselves. No attempt was made to redis-

TABLE VII
EMPIRICAL AVERAGES FOR THE RATING SCALES

<i>Attribute</i>	<i>Self-Ratings</i> <i>N = 187</i>	<i>Associates' Ratings</i> <i>N = 108</i>
Beauty	3.3369	3.3778
Health	2.6979	2.5833
Popularity	3.4305	2.8519
Optimism	3.3182	2.6481
Nervousness	5.3610	5.3056
Temperament	3.0455	2.3981
Attitude towards Sex	3.3075	3.4185
Attitude towards Family	2.7620	2.3704
Work Habits	3.4947	2.8519
Social Confidence	3.8369	2.9815

tribute the ratings for all seven points of the scale. For associates' ratings it was necessary first to average for each subject the points at which she had been rated by different associates for each scale separately. For example, rater number 1 might place the ratee at point 1 on the scale for beauty, while rater number 2 might place her at point 2. For this ratee the average associate rating for beauty would be 1.5. Having averaged for each scale for each subject the points at which the ratee was placed by her associates, we computed as for self-ratings an empirical average of these average associate ratings. The number of ratings on any one subject varied from 2 to 9. This means that some of the subjects were more reliably appraised than others, a consensus of opinion by independent judges being considered customarily as superior to a few ratings. This could not be helped, as the extent of a subject's acquaintances varied greatly. Subjects rated by only one associate, as well as those not rated at all are excluded from this section which deals with validity. The empirical averages found are shown in Table VII.

FIGURE III

Below you are given a rating scale for the trait of beauty. Please indicate, *by placing a check mark*, the point on the scale which best describes the person you are rating. Your rating will be kept entirely confidential.

My name is:

I am rating:

1)	Beautiful—	Would rank in the highest 2% of the population for looks.
2)	Pretty—	Good to look at, but not so outstanding as to be called beautiful.
3)	Attractive—	Passably good looking.
4)	Average—	
5)	Unattractive—	Slightly below the average in looks.
6)	Homely—	Noticeable defects.
7)	Ugly—	Would rank in the lowest 2% of the population for looks.

The problem of validity involves the question of whether the withdrawal attitude of the subjects, as it appears to them introspectively, has its correlate in objectively observable behavior. It was to answer this query that we obtained asso-

ciates' ratings on as many subjects as possible. In addition to employing associates' ratings as a check upon the validity of the personality inventory, we also secured the self-ratings. The same scales were used for both. Only associates' assessments may strictly be considered a measure of validity. The comparison of self-ratings with scores for withdrawal attitude is largely a technique for measuring reliability, since under these circumstances there are obtained two measures of the same behavior. This at least holds true for eight of the ten attributes rated, those which correspond to the eight categories of the Individuality Record (omit beauty and popularity). It is interesting, however, to compare self-ratings with associates' ratings in treating the problem of validity.

Tables VIII and IX summarize the findings for associates' and self-ratings respectively. "A" stands for the group rated above the empirical average in the various attributes, "B" for the group rated below that average. Had the ratings been made by experienced raters well acquainted with the subjects, it would have been interesting to correlate the positions on the scales at which the subjects were rated with their WA scores. The associates' ratings were, however, admittedly rough, because of lack of experience of the raters, and in some cases their slight degree of acquaintance with the person rated. Therefore a dichotomous classification, above and below average was used, instead of the finer original 7 point division. Since only the rough classification was feasible for associates' ratings the same classification was used for self-ratings. Because of the skewness of the ratings more cases are found above the empirical average than below. The average WA scores for the A and B groups were found and the reliability of the difference between the averages computed. Although associates' ratings were obtainable on only 108 subjects, the self-ratings were more numerous, N here being 187.

Consider first the associates' ratings. It will be noticed that in nearly every instance those judged to be below the average for a particular characteristic, as a group scored higher in withdrawal attitude than those rated above the average. There is only one exception to this trend, the rating for health, where the chances are higher that the A group is judged to be more reclusive. It will be recalled that the scale for nervousness runs in the opposite direction to that of the other scales, so that the A group here is the inferior group, and is judged, as

TABLE VIII
ASSOCIATES' RATINGS

Trait	No. of Cases Rated Above Av.	No. of Cases Rated Below Av.	Av. W.A. Score for A Group	Av. W.A. Score for B Group	Diff. Between Av. of A and B	σ Av. A	σ Av. B	σ Diff.	Chances in 100 of a True Diff. Greater than Zero	
									Diff.	σ Diff.
Beauty	67	41	49.8135	51.5245	1.7110	.9221	1.3712	1.6524	1.0355	85 B higher
Health	71	37	50.9505	50.0675	.8830	.9789	1.3462	1.6645	.5305	70 A higher
Popularity	69	39	50.0365	51.2180	1.1815	.9258	1.3894	1.6696	.7077	76 B higher
Optimism	70	38	49.2145	52.7630	3.5485	.9028	1.3795	1.6487	2.1523	98 B higher
Nervousness	60	48	51.1665	49.5835	1.5830	.9921	1.2222	1.5742	1.0056	84 A higher
Temperament	67	41	49.6640	51.2805	1.6165	.9335	1.3335	1.6278	.9931	84 B higher
Attitude towards Sex	60	48	48.9165	52.3960	3.4795	.9796	1.1921	1.5430	2.2550	99 B higher
Attitude towards Family	63	45	49.7220	51.3890	1.6670	.9899	1.2261	1.5758	1.0579	86 B higher
Work Habits	64	44	49.0625	52.3865	3.3240	.9236	1.2906	1.5870	2.0945	98 B higher
Social Confidence	60	48	49.0835	52.2915	3.2080	.9682	1.2322	1.5671	2.0471	98 B higher

N = 108

TABLE IX
SELF-RATINGS

Trait	No. of Cases Rated Above Av.	No. of Cases Rated Below Av.	Av. W.A Score for A Group	Av. W.A Score for B Group	Diff. Between Av. of A and B	Chances in 100 of a True Diff. Greater than Zero			
						σ Av. A	σ Av. B	σ Diff.	Diff. σ Diff.
Beauty	108	79	50.0925	51.8040	1.7115	.8372	.9545	1.2696	1.3481
Health	138	49	49.6740	54.4390	4.7650	.7227	1.1436	1.3528	3.5223
Popularity	140	47	50.2855	52.6065	2.3210	.6949	1.3828	1.5476	1.4998
Optimism	138	49	49.3840	54.9490	5.5650	.6485	1.4383	1.5960	3.4868
Nervousness	103	84	54.0535	46.9645	7.0890	.8711	.7094	1.1234	6.3103
Temperament	155	32	50.1130	54.8440	4.7310	.6424	1.7812	1.8935	2.4985
Attitude towards Sex	144	43	50.9720	50.9885	.0165	.7104	1.3614	1.5356	.0107
Attitude towards Family	126	61	49.7220	52.9920	3.2700	.7583	1.0542	1.2986	2.5181
Work Habits	125	62	49.5800	53.3870	3.8070	.7336	1.1321	1.3490	2.8221
Social Confidence	106	81	49.2455	52.8750	3.6250	.7218	1.0648	1.2864	2.8179

N = 187

might be expected to be more reclusive than the B group. No explanation can be offered as to why the judges should err in appraising the attribute of health. It is evident from the table for associates' ratings that for no attribute do we have 100% certainty that the group rated on the inferior side of the average on the rating scales will make average WA scores higher than the superior group. However, with the one exception noted, that of health, the chances are always in this direction.

The self-ratings tell in general the same story as the associates', only more emphatically. Here the chances in 100 of a true difference greater than zero between the averages of the A and B groups are high for every attribute except attitude toward sex. The rating scale for attitude toward sex employs terms which might be deemed derogatory. Although a subject might answer reclusively a number of the questions on sex in the Individuality Record, along with other questions, so that she would obtain an appreciable score for withdrawal attitude, she might be unwilling to rate herself as "squeamish" or "Mid-Victorian."

It should be pointed out here that the rating scales were originally devised for use by associates only. Later it was decided to employ them also for self-rating, as a further check upon the responses given to the questions in the Individuality Record. The terms on the rating scale for sex are good descriptions when used in rating another person, not so good for self-rating, because of the social prejudice among the younger generation against narrow views on sex.

The comparison of the tables for associates' and self-ratings is interesting because the trend is the same in both. Withdrawal attitude is, however, not so observable by associates as by the subject herself. Two factors possibly effect this phenomenon:

1. Many withdrawal tendencies may be more subjective in nature than objective. These would not be so apparent to an associate unless she knew the subject intimately, unless she had not only observed objective behavior but had also received from the subject verbal reports as to the subject's feelings in this or that situation. Even under these circumstances a subject may actually adjust better to situations than her subjective feeling tone would indicate.

2. The raters were inexperienced. With training in observation and in the technique of rating a closer correspond-

ence between the subjects' reports on the inventory and associates' judgments might well be found.

In view of the factors complicating the ratings, it would seem that the trend of agreement between low or high scores on the inventory and placement above or below the average on the rating scales is quite significant. With more refined methods of judgment than the rating scale and with better trained judges we should expect the correspondence to appear even more markedly than is evident in our results.

PART II

CHAPTER I

WITHDRAWAL ATTITUDE IN RELATION TO OTHER VARIABLES

I. The Relation of Withdrawal Attitude to Verbal Ability

We might raise the question of the relationship of withdrawal attitude to mental ability. Since the current tendency in mental testing is to study separate functions rather than a hotchpot of different capacities, we chose for study one ability, the verbal. As representative of this function, a vocabulary test was employed. The selection of this test was based on the finding that vocabulary correlates to the extent of about .90

TABLE X
CORRELATION OF WITHDRAWAL ATTITUDE AND
VERBAL ABILITY*

<i>r between WA and Ability on Vocab. Test</i>		<i>P.E.</i>	<i>r between WA and Vocab. with Age Partialled Out</i>		<i>P.E.</i>
Sigma	18.0724				
Mean	108.7677				
	.2628	± .0504	.2755		± .0500

N = 155

*Although the vocabulary test was scored in terms of errors, the correlation reported above is that between excellence of achievement on the test and WA score. The mean is the average number of words correct.

with a central factor of verbal ability (12). We found the reliability of this test, correlating odds against evens, and raising the resulting coefficient by the Spearman-Brown formula to be .9346. Table X presents the finding. The number of subjects is 155.⁶ The ages range from 16 years, 7 months to 22 years, 5 months. To partial out age makes no appreciable difference in the relationship.

There are reported in the literature (15) a number of studies on the relationship between "wrong" responses on adjustment questionnaires and measures of intelligence. These correlations all approximate zero. They are not directly comparable with our finding, of course, since we employed a test of one specific ability.

⁶ Because of incomplete records in one or more of the variables studied in Part II of the research, it was necessary to reduce the number of subjects. A group of 155 of the same subjects composing the population of Part I is used throughout Part II.

II. *The Relation of Withdrawal Attitude to Measures of Physique and Health*

The study of the relationship of withdrawal attitude to physique is limited to three such measures: 1. strength of grip, 2. height-weight ratio, and 3. vital index. These measurements were taken only once, so that no figure for reliability can be presented. That they are reliable is indubitable, since they were made by means of calibrated instruments by members of the physical education department, who are accustomed to making such measurements on large groups of individuals.

It will be recalled that the subjects in Part II ranged in age from 16 years, 7 months to 22 years, 5 months.⁷ The age range

TABLE XI
CORRELATIONS BETWEEN WITHDRAWAL ATTITUDE AND MEASURES OF PHYSIQUE

	<i>Grip</i>	<i>Ht./Wt. Ratio</i>	<i>Vital Index</i>
Sigma	12.1480	.0616	.2076
Mean	70.9032	.5210	1.5706
WA	— .0507	.0597	.0956
		Probable Errors	
	± .0540	± .0540	± .0537

N = 155

of the 209 subjects of Part I was greater. It seemed desirable to delimit the age range in Part II of this investigation, because of the measurements for height-weight ratio, which constitutes one of the variables. Authorities state that the determination of body type should be made between puberty and maturity. Prior to adolescence the celerity of growth is too great for accurate measurement, whereas after twenty-five, various factors again conspire to render a nice determination difficult. One of the most obvious of these is a propensity among all types toward greater macrosplanchny than is ordinarily encountered in youth.

The correlations of the variables with attitude of withdrawal are furnished in Table XI.

The results disclose practically no relationship between withdrawal attitude and these physical measures. Yet the

⁷ The decrease in number of subjects through limitation in age-range is negligible. The great factor making for fewer subjects in Part II of the study is the number of incomplete records in one or more of the variables.

figures are interesting. Consider the correlation of $-.0507$ between withdrawal attitude and strength of grip. Evaluated in terms of its P.E. this coefficient is unreliable, and being so small is easily accounted for as a chance deviation from zero. The coefficient raises a demand for rejection of the popular superstition that she who grips our hand firmly thereby reveals a strong or positive personality. Those who are withdrawing in their characteristic attitude pattern are about as likely to have a strong grip as individuals who are positive.

Another conception, and in this instance one to which serious attention has been paid among psychologists, also fails of corroboration by our data. According to Kretchmer's view (10) there are four types of bodily build: asthenic, athletic, pyknic, and dysplastic. The pyknics are those whose bodies are short, rotund and plump, whereas the asthenics are tall, slender, and generally feeble. The athletics are muscular, strong and vigorous. The dysplastics are a mixed type. The study of clinical cases leads Kretchmer to conclude that among pyknics the manic-depressive psychosis is most likely to appear, whereas asthenics and less frequently athletics and dysplastics are predisposed to schizophrenia. Now the greater the ht./wt. ratio the more would the individual tend to fall into the asthenic group, since to this type belong those who show a relative excess of height over weight. Extreme forms of withdrawal attitude are clinically recognized as schizophrenia. Since within the group which we studied, the correlation between withdrawal attitude and ht./wt. ratio is negligible, we are unable to accept Kretchmer's conception as applicable to such a population as we employed.

There remains one more variable to be considered, that of general health. In order to ascertain what relation health rating bears to withdrawal attitude, we first classified health into two divisions, good and poor. The category designated as good comprised 61 cases of students whose health rating was A. The category of poor health included 94 cases of those who had been assessed B, C, or D. The biserial r between poor health and withdrawal attitude was found to be $.1431 \pm .0675$. The relationship is positive, as would be expected in view of the fact that the category of physical symptoms in the Individuality Record correlated with the other categories to the extent of $.1818$ to $.4317$, and that physical symptoms correlated with the total raw score to the extent of $.5717$. The relationship is how-

ever small, and because of the size of the P.E. not statistically reliable.

With the aim of discovering how well the different letter grades of health discriminate among the subjects for withdrawal attitude, we computed the average negative attitude score for each of these rubrics, A, B, C, D, the reliability of the difference between the averages, and the chances in 100 of this being a true difference greater than zero. C and D categories were combined because of the small number of cases in each. Table XII shows our findings. The chances in 100 of a

TABLE XII
WITHDRAWAL ATTITUDE AND HEALTH

<i>Health Rating</i>	<i>Number of Cases</i>	<i>WA Score</i>	<i>Comparison of</i>	<i>Diff. in Average Score</i>	<i>σDiff.</i>	<i>Diff. σDiff.</i>	<i>Chances in 100 of a True Difference Greater Than Zero</i>
CD	19	53.2895	CD & B	2.9895	2.5885	1.1549	87 CD higher
B	75	50.3000	CD & A	4.3140	2.5451	1.6950	96 CD higher
A	61	48.9755	B & A	1.3245	1.2127	1.0922	86 B higher

N = 155

true difference between the average withdrawal attitude scores for the three health groups never reaches the point of certainty. However, as we go from good to poor health the averages do increase consistently, the chances in every comparison being over 85 in 100 that the difference is a true difference greater than zero.

Lecky (11) found in his group of college men that negative attitude tended to be somewhat more pronounced in those with a poor physical rating than in those with good health. The other variables upon which we report were not included in his study, so no comparisons can be made for these. His finding with regard to health rating is consonant with our results.

CHAPTER II

THE RELATION OF WITHDRAWAL ATTITUDE TO PERSONAL DATA

1. *Age*

It will be recalled that in Table II the correlation between age and total raw score for withdrawal attitude is given as .1480. This correlation is based upon a population of 209 subjects. Using the WA score, the average of withdrawal attitude scores from the two batteries, we computed the correlation between age and withdrawal attitude for the 155 subjects of Part II of the investigation. Here the age range was arbitrarily restricted within the limits, 16 years, 7 months to 22 years, 5 months. An unreliable correlation with age was obtained, the coefficient being $.1165 \pm .0534$.

A number of studies dealing with the relationship of age to personality adjustment are reviewed by Symonds (15). No definite conclusions may be drawn because the findings of different investigators fail of accord.

2. *College-Major*

The results of the study of withdrawal attitude in relation to choice of major are presented in Table XIII. The average WA score was determined for each of the seven classifications of major. The reliability of the differences between these averages was then determined. The number of cases for business and fine arts majors is too small to permit of a valid statistical comparison, so these are omitted from the table. Those who intend to specialize in languages have the highest score, those who plan to major in mathematics the lowest. The average of those who contemplate specialization in languages is interesting in view of the correlation of .2628 between verbal ability and withdrawal attitude, reported in Chapter I of Part II. A comparison of the averages for different major groups shows that the differences are not completely reliable. The highest probabilities occur for the difference between language and social science, and language and mathematics.

3. *Occupational Choice*

The statistical findings upon the relationship between withdrawal attitude and occupational choice are shown in Table XIV. Several of the categories under which occupational

TABLE XIII
WITHDRAWAL ATTITUDE AND CHOICE OF MAJOR

Major	No. of Cases	Av. WA Score	Comparison of	Difference in Av.	σ Diff.	Diff. σ Diff.	Chances in 100 of a True Diff. Greater than Zero
Language	57	51.6230	Lang. & Undecided	2.1230	2.4468	.8677	80 Lang. higher
Undecided	25	49.5000	Lang. & Soc. Sc.	2.3050	1.4528	1.5866	94 Lang. higher
Social Science	33	49.3180	Lang. & Sc.	2.6855	3.0731	.8739	80 Lang. higher
Science	14	48.9375	Lang. & Math.	3.1230	1.9759	1.5805	94 Lang. higher
Mathematics	15	48.5000	Undecided & Soc. Sc.	.1820	2.4809	.0734	52 Undecided higher
			Undecided & Sc.	.5625	3.6848	.1527	56 Undecided higher
			Undecided & Math.	1.0000	2.8193	.3547	64 Undecided higher
			Soc. Sc. & Sc.	.3805	3.1090	.1224	54 Soc. Sc. higher
			Soc. Sc. & Math.	.8180	2.0180	.4054	65 Soc. Sc. higher
			Sc. & Math.	.4375	3.3852	.1292	55 Sc. higher

N = 144

TABLE XIV
WITHDRAWAL ATTITUDE AND OCCUPATIONAL CHOICE

Occupation	No. of Cases	Av. W/A Score	Comparison of	Difference in Av.	Diff.		Chances in 100 of a True Diff. Greater than Zero
					σ Diff.	σ Diff.	
Science	17	52.2060	Sc. & Lit.	.3955	3.0299	.1305	55 Sc. higher
Literature	29	51.8105	Sc. & Undecided	1.7895	4.0019	.4472	67 Sc. higher
Undecided	12	50.4165	Sc. & Teach.	2.0925	2.9515	.7090	76 Sc. higher
Teaching	44	50.1135	Sc. & Soc. Serv.	2.6225	3.2341	.8109	79 Sc. higher
Social Service	12	49.5835	Sc. & Business	3.1270	3.0657	1.0200	85 Sc. higher
Business	19	49.0790	Lit. & Undecided	1.3940	3.2933	.4233	66 Lit. higher
			Lit. & Teach.	1.6970	1.8820	.9017	82 Lit. higher
			Lit. & Soc. Serv.	2.2270	2.3000	.9683	83 Lit. higher
			Lit. & Business	2.7315	2.0564	1.3283	91 Lit. higher
			Undec. & Teach.	.3030	3.2214	.0941	54 Undecided higher
			Undecided & Soc. Serv.	.8330	3.4821	.2392	59 Undecided higher
			Undecided & Business	1.3375	3.3262	.4021	66 Undecided higher
			Teach & Soc. Serv.	.5300	2.1958	.2414	59 Teach. higher
			Teach. & Business	1.0345	1.9391	.5335	70 Teach. higher
			Soc. Serv. & Business	.5045	2.3470	.2153	59 Soc. Serv. higher

N = 133

choices are subsumed contain such a small number of cases that valid statistical conclusions are difficult. However, even where the number of cases is fairly large, the average WA score for such groups is small, so that we must cast aside occupational choice as even a rough indicator of withdrawal attitude. Perhaps one difficulty lies with the classifications. They are admittedly arbitrary and coarse. Whether reliable differences would be found with other classifications, finer perhaps and containing a greater number of cases, is still a moot question. The problem certainly cannot be settled from our data.

4. *Father's Education*

The results for this study are presented in Table XV, which is self-explanatory. No trend at all is shown in WA score with increase or decrease of education.

5. *Father's Degree*

The biserial r between WA scores for those whose fathers hold academic degrees and for those whose fathers do not is negligible, $.0142 \pm .0663$. Fifty-four fathers have degrees, one hundred and one do not.

6. *Mother's Education*

The statistical findings for the relation between WA score and mother's education are reported in Table XVI. Since the number of cases for the EHCP group is only five, we have omitted this category from the table. Normal School is classed as a Professional School. The results for the present study do not correspond to those for father's education in relation to withdrawal attitude, as far as rank order of the various groups is concerned. The daughters of mothers who are graduates only of elementary school have the highest average WA score, whereas the daughters of fathers belonging to this group have next to the lowest score. The lowest group when mother's education is considered is that which is highest for daughters of fathers falling in this category, namely the EHC group. For the study of mother's education, although the differences between the averages are never completely reliable, the chances are in general higher than for the daughters of fathers belonging to the same categories. Still, no very startling conclusions may be drawn, because the trend is not pro-

TABLE XV
WITHDRAWAL ATTITUDE AND FATHER'S EDUCATION

Category	No. of Cases	Av. WA Score	Comparison of	Difference in Av.	Diff.		Chances in 100 of a True Diff. Greater than Zero
					Diff.	Diff.	
EHC	23	51.6305	EHC & EH	.8650	2.1943	.3942	65 EHC higher
EH	49	50.7655	EHC & EHCP	2.0470	2.0704	.9887	84 EHC higher
EHCP	24	49.5835	EHC & E	2.8450	2.2282	1.2768	90 EHC higher
E	35	48.7855	EHC & EHP	2.9400	2.4579	1.1961	88 EHC higher
EHP	21	48.6905	EH & EHCP	1.1820	1.7658	.6694	75 EH higher
			EH & E	1.9800	1.9485	1.0162	85 EH higher
			EH & EHP	2.0750	2.2075	.9400	83 EH higher
			EHCP & E	.7980	1.8078	.4414	67 EHCP higher
			EHCP & EHP	.8930	2.0843	.4284	67 EHCP higher
			E & EHP	.0950	2.2412	.0424	52 E higher

EHC indicates that the father is a graduate of Elementary School, High School and College.

EH indicates graduate of Elementary School and High School.

EHCP indicates graduate of Elementary School, High School, College and Professional School.

E indicates graduate of Elementary School.

EHP indicates graduate of Elementary School, High School and Professional School.

N = 152

gressively from high average WA score for daughters of mothers with the least amount of education to low average WA score for daughters of mothers with the greatest amount of education.

7. *Parents' Education*

It was conjectured that differences in educational status of parents might possibly be related to withdrawal attitude in the children. The biserial r between withdrawal attitude and difference in educational status of parents was therefore computed. It was impossible to use any refined measure of identity or difference in education, so we merely employed the same classification for the education of parents as was used in Tables XV and XVI. The biserial r is $.1143 \pm .0691$ between WA score and disparity in parents' educational status. Fifty-five have the same status, the other hundred differ. The correlation found is very low, and quite unreliable in view of its large P.E.

8. *Father's Occupational Level*

The relationship of father's occupational level to WA score is, like that of the other variables which we have been studying, disappointing as far as the light which it throws on the concomitants of withdrawal attitude is concerned. The findings are presented in Table XVII. No particular trend is evident. Regardless of how the classes are combined or compared, the differences between the averages remain too small to be statistically significant.

9. *Position of the Subject in Her Family*

Some interesting findings bearing upon the relation of WA score to position in the family are reported in Table XVIII. Oldest children have the highest average score, only children the lowest. The chances are 99 in 100 that this is a significant difference. Intermediate and oldest daughters have practically the same score. Hence the chances are also high that the intermediate children are more reclusive as a group than the only children.

Much has appeared in psychological literature regarding the personality adjustment of only children. Bohannon (1), in 1898, made a questionnaire study of 381 children. His conclusions in part were:

TABLE XVI
WITHDRAWAL ATTITUDE AND MOTHER'S EDUCATION

Category	No. of Cases	Av. WA Score	Comparison of	Difference in Av.	σ Diff.	Diff. $\frac{\text{Diff.}}{\sigma\text{Diff.}}$	Chances in 100 of a True Diff. Greater than Zero
E	30	52.0000	E & EHP	1.3750	2.1767	.6317	74 E higher
EHP	32	50.6250	E & EH	2.4105	1.9296	1.2492	89 E higher
EH	67	49.5895	E & EHC	5.6765	2.3046	2.4631	99 E higher
EHC	17	46.3235	EHP & EH	1.0355	1.6932	.6116	73 EHP higher
			EHP & EHC	4.3105	2.1106	2.0380	98 EHP higher
			EH & EHC	3.2660	1.8549	1.7607	96 EH higher

N = 146

TABLE XVII
WITHDRAWAL ATTITUDE AND FATHER'S OCCUPATIONAL STATUS

Category	No. of Cases	Av. WA Score	Comparison of	Difference in Av.	σ Diff.	Diff. $\frac{\text{Diff.}}{\sigma\text{Diff.}}$	Chances in 100 of a True Diff. Greater than Zero
Semi-P. _a	80	50.5625	Semi-P. _a & Prof.	1.0625	1.5029	.7070	76 Semi-P. _a higher
Semi-P. _{a&b}	93	50.4570	Semi-P. _{a&b} & Prof.	.9570	1.4564	.6571	75 Semi-P. _{a&b} higher
Prof.	50	49.5000	Semi-P. _a & Semi-P. _b +SL	1.3960	2.0672	.6753	75 Semi-P. _a higher
Semi-P. _b & SL	18	49.1665	Prof. & Semi-P. _b +SL	.3335	2.1289	.1567	56 Prof. higher

Semi-P._a indicates the Semi-Professional a class of the Taussig classification.
 Semi-P._b indicates the Semi-Professional b class of the Taussig classification.
 Prof. indicates the Professional class of the Taussig classification.
 SL indicates the Skill Labor class of the Taussig classification.
 N = 148.

TABLE VIII
WITHDRAWAL ATTITUDE AND POSITION IN THE FAMILY

<i>Position in Family</i>	<i>No. of Cases</i>	<i>Av. WA Score</i>	<i>Comparison of</i>	<i>Difference in Av.</i>	$\frac{\text{Diff.}}{\sigma \text{Diff.}}$	<i>Chances in 100 of a True Diff. Greater than Zero</i>
Oldest	49	51.4795	Oldest and Intermediate	.3640	.1510	56 Oldest higher
Intermediate	26	51.1155	Oldest and Youngest	2.2355	1.3553	91 Oldest higher
Youngest	43	49.2440	Oldest and Only	3.5740	2.3070	99 Oldest higher
Only	37	47.9055	Intermediate and Youngest	1.8715	.7677	78 Intermediate higher
			Intermediate and Only	3.2100	1.3539	91 Intermediate higher
			Youngest and Only	1.3385	.8399	80 Youngest higher

N = 155.

1. Only children are inferior to the average in health and vitality.

2. Nervous and physical disorders are unusually prevalent in the families.

Fenton (3) studied two groups of subjects: a) 193 from kindergarten to the sixth grade, of whom 34 were only children, b) two groups of university students, totalling 512, including 73 only children. The rating scale method was used with the first group, each child being rated for twelve characteristics by one or two teachers who had known him for at least one semester. The conclusions drawn were:

1. Only children do not differ greatly from other children in generosity, sociability, leadership, popularity, self-confidence, aggressiveness, truthfulness, emotional response and stability, modesty, obedience and initiative.

2. Fewer only children were noted as nervous, but those who were so noted seemed to have a greater number of symptoms than other children.

The university subjects answered the Woodworth P.D. sheet, The results found were:

1. On anonymous returns, subjects who were only children gave more neurotic responses.

2. On returns containing names, only children gave on the average fewer neurotic responses.

Guilford and Worcester (6) undertook to check Fenton's study. The subjects in their investigation were 162 children in 8A of a junior high school. Twenty-one were only children. Information about 15 different characteristics was obtained for each child through teachers' ratings. In general only children equalled or excelled in various personality attributes children who had siblings. Stuart (14), studying young men, found no indication that scores on the Colgate Mental Hygiene Test were dependent upon the number of siblings. Thurstone (17) using the Personality Schedule, discovered that score on this inventory was unrelated to birth order in college freshmen. Similar results were found by Lecky (11) in his study with the Individuality Record.

TABLE XIX
WITHDRAWAL ATTITUDE AND NUMBER OF SIBLINGS

<i>No. of Sibs</i>	<i>No. of Cases</i>	<i>Av. W.A. Score</i>	<i>Comparison of</i>	<i>Difference in Av.</i>	<i>Diff. $\frac{\sigma \text{Diff.}}{\sigma \text{Diff.}}$</i>	<i>Chances in 100 of a True Diff. Greater than Zero</i>
3	18	53.2555	3 & 2	2.8985	2.7324	1.0608
2	42	50.3570	3 & 1	3.0380	2.5544	1.1893
1	46	50.2175	3 & 0	5.3500	2.5555	2.0935
0	37	47.9055	2 & 1	1.1395	1.7744	.0786
			2 & 0	2.4515	1.7760	1.3803
			1 & 0	2.3120	1.4877	1.5541

N = 143.

TABLE XX
WITHDRAWAL ATTITUDE AND NUMBER OF BROTHERS

<i>No. of Brothers</i>	<i>No. of Cases</i>	<i>Av. W.A. Score</i>	<i>Comparison of</i>	<i>Difference in Av.</i>	<i>Diff. $\frac{\sigma \text{Diff.}}{\sigma \text{Diff.}}$</i>	<i>Chances in 100 of a True Diff. Greater than Zero</i>
1	49	50.0510	1 & 0	.3075	1.3891	.2214
0	78	49.7435	1 & 2	.4455	2.5091	.1776
2	19	49.6055	0 & 2	.1380	2.4436	.0565

N = 146.

10. *Number of Siblings*

The findings are given in Table XIX. Some indication is shown for those with the greatest number of sibs to have higher WA scores than those with fewer or no sibs. The differences between the averages are not completely reliable. The greatest chance of a reliable difference occurs when those having no sibs are compared with those having three sibs.

11. *Number of Brothers*

The average WA scores for those having no brothers, one, and two brothers, are so nearly alike, that evidently the presence or absence of brothers in the family is unrelated to the incidence of withdrawal attitude in our subjects. The findings are reported in Table XX.

12. *Religious Preference*

Religious preference in relation to WA score is reported in Table XXI. Catholics and Jews have the highest WA scores, Protestants the lowest. Although the difference is not completely reliable, the chances are 98 in 100 that the Catholics have higher scores than the Protestants. This result is interesting. It is generally conceded that confession, an important duty of the Roman Catholic Church, is comparable to the talking-out method of psychoanalysis, a therapeutic treatment for mental conflicts. A priori, we might expect, therefore, that Catholics would have lower scores than the other groups studied. Probably there is little overlapping between the kind of difficulty reported at the confessional and that studied by the Individuality Record, so that confession leaves the reclusive symptoms of the subject untouched.

Lecky (11) found that college men with no religious beliefs tended to have high negative attitude scores. Our results for college women fail to corroborate his for men.

13. *Political Preference*

Table XXII shows the statistical findings for WA score in relation to political preference. The differences are not very reliable. The most interesting finding is that the socialists are the most positive group. However in view of the small number of cases in this category we are not in a position to stress this finding as very significant. It would be well to investigate

TABLE XXI
WITHDRAWAL ATTITUDE AND RELIGIOUS PREFERENCE

Preference	No. of Cases	Av. W.A. Score	Comparison of	Difference in Av.	Diff.		Chances in 100 of a True Diff. Greater than Zero
					σ Diff.	σ Diff.	
C	27	52.1295	C & J	.0460	2.3953	.0192	50 C higher
J	24	52.0835	C & N	.7165	2.6580	.2696	61 C higher
N	23	51.4130	C & P	3.5800	1.7828	2.0081	98 C higher
P	81	48.5495	J & N	.6705	2.7807	.2411	59 J higher
			J & P	3.5340	1.9622	1.8010	96 J higher
			N & P	2.8635	2.2756	1.2583	89 N higher

C indicates Catholic, J Jew, N None, P Protestant.
N = 155.

the relationship between withdrawal attitude and socialism in a larger group, because theoretically it seems as though the low average WA score found in our study might be corroborated. Coupled with the radicalism of the socialist we should expect positive behavior rather than negative.

TABLE XXII
WITHDRAWAL ATTITUDE AND POLITICAL PREFERENCE

<i>Preference</i>	<i>No. of Cases</i>	<i>Av. WA Score</i>	<i>Comparison of</i>	<i>Diff. in Av.</i>	<i>σDiff.</i>	<i>Diff. σDiff.</i>	<i>Chances in 100 of a True Diff. Greater than Zero</i>
D	27	51.7595	D & N	1.1825	2.1338	.5542	71 D higher
N	52	50.5770	D & R	2.1960	2.0989	1.0463	85 D higher
R	63	49.5635	D & S	3.8750	2.7848	1.3915	92 D higher
S	13	47.8845	N & R	1.0135	1.4152	.7165	76 N higher
			N & S	2.6925	2.3136	1.1638	88 N higher
			R & S	1.6790	2.2815	.7359	77 R higher

D indicates Democrat, N none, R Republican, S Socialist.
N = 155.

CHAPTER III

SUMMARY AND CONCLUSIONS

PART I

1. A group of 209 college women, fairly homogeneous as regards age, social, and educational status answered the Individuality Record, an inventory calling for Yes, No, or ? responses to 200 questions. The Record measures negative or withdrawal attitude in a number of different situations.
2. Statistical analysis of the results indicates that a general factor is operative in the kind of response, that of approach or withdrawal, given in the different situations, represented by the eight categories: 1. social confidence, 2. cooperation, 3. attitude toward family, 4. nervous symptoms, 5. optimism, 6. physical symptoms, 7. attitude toward sex, and 8. work habits, of the questionnaire. Evidence for the homogeneity of withdrawal attitude is as follows:
 - a. The numerical value of the reliability coefficient is .9427. This represents the consistency shown between the kind of responses made to odd and even questions.
 - b. The tetrad difference criterion is satisfied, not only in Battery I, comprising categories 1, 2, 3, 4 and in Battery II, composed of categories 5, 6, 7, 8 but also in Battery III, made up of 3 and 4 of the first battery and 7 and 8 of the second battery.
 - c. The correlation between the scores for withdrawal attitude predicted for Battery I and Battery II is found to be .7003. This figure, when corrected for attenuation due to the unreliability of the two batteries becomes .8545.
3. Multiple correlations of Battery I and II with their central factor are given. For each subject a withdrawal score, designated by the letters "WA" was computed, by averaging the scores predicted from the multiple regression equations for Battery I and II.
4. The validity of the questionnaire is roughly indicated by the generally higher average WA score of those whom associates rate as falling on the inferior side than of those falling on the superior side of the average on a number of

rating scales which deal with characteristics studied in the various categories of the Individuality Record.

PART II

1. The WA scores of 155 of the same subjects as those composing the population of Part I were studied in relation to:
a) verbal ability, b) measures of physique and health, and
c) personal data. The age range for the group of 155 subjects lay between 16 years 7 months and 22 years 5 months.
2. A slight tendency is shown, indicated by the correlation of $.2628 \pm .0504$, for withdrawal attitude and verbal ability to be correlated.
3. Measures of physique bear no relationship to withdrawal attitude. An unreliable biserial r of $.1431 \pm .0675$ is found to obtain between WA score and poor health. A division of health into categories finer than merely good and poor shows a tendency, not completely reliable statistically, for increasing poor health to accompany increase of average WA score.
4. An inappreciable and unreliable correlation of $.1165 \pm .0534$ was found between age in months and WA score.
5. The differences between the average WA scores for five different choices of major are not completely reliable. The greatest difference in score was found between those choosing languages, showing most reclusiveness, and those selecting mathematics, manifesting least withdrawal attitude, the chances being 94 in 100 that this is a reliable difference.
6. Choice of occupation shows no clear cut relationship to withdrawal attitude. Those choosing science have the highest average score, those selecting business careers the lowest. The difference is not completely reliable statistically, the chances being only 85 in 100 that the difference is significant. The number of cases is too small, anyway, to permit the drawing of definite conclusions.
7. Father's educational status is unrelated to withdrawal attitude in any systematic way.
8. Whether or not the fathers are holders of academic degrees is inconsequential as far as the withdrawal attitude of daughters is concerned.

9. Mother's educational status is unrelated to daughter's reclusiveness in any systematic fashion.
10. Similarity or disparity in parents' educational status is unrelated to withdrawal attitude in daughters, the biserial r being the negligible one of $.1143 \pm .0691$ between disparity and withdrawal attitude.
11. Father's occupational level is unrelated to daughter's withdrawal attitude.
12. Position in the family seems to be related to withdrawal attitude. Eldest children have the highest scores, only children the lowest, the chances being 99 in 100 that this is a reliable difference.
13. The number of brothers in the family is unrelated to sisters' scores in withdrawal attitude.
14. The chances are high, 98 and 96 in 100 respectively, that those preferring Catholicism or Judaism have average WA scores higher than those preferring Protestantism.
15. Socialists have lower WA scores than those preferring the two major parties or those who have no preference. This difference is in no case completely reliable statistically, and the small number of socialists in our study makes a definitive statement of the relation of withdrawal attitude to preference for socialism impossible.



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